The Macdonald FARM Journal

Vol. 21, No. 4 April, 1960

SPRING SONG

Editorial

Sharpening Tools of Management

THE increasing complexity of farming today makes it increasingly important for farmers to sharpen their "management tools." Planning and budgeting have long been recognized by farmers and non-farmers as important business organization tools. The adoption of a single new practice on the farm now-a-days may change the livestock programme which in turn requires replanning buildings, machinery or labour programmes. A plan or budget for the farm organization will help in fitting farm enterprises and farm methods together into a more profitable farm unit.

Most farmers do some budgeting or planning, some of these plans are more formal than others. Some plans are thought out while riding the tractor, milking the cows or forking feed. Other farmers are more formal in that they use a pencil and paper to estimate how profitable one enterprise will be versus another of whether to do this or that. The important thing is not how to plan but to get the budgeting done. However, only the relatively simple or small decisions can be adequately thought out in one's mind. Few of us have what one might call electronic minds. We need to budget things out in more details. We simply cannot remember all of the figures necessary for setting up a complete farm plan or to change this farm plan. To start with we need to put down in an orderly fashion how to operate our entire farm as profitably as possible. The advantages of formalizing a plan on paper lie in the fact that you are more likely to try to quantify the data that you put into your budget. You will in all likelihood look up factual data to substantiate guides that you are including as possible alternatives to your present plan. Using the plan format itself will organize your thinking, enabling you to reflect on your planning problems in a more orderly fashion. The use of farm planning handbooks will also ease your task.

Many of our beginning farmers in recent years have been exposed to more or less formal budgeting as a requirement to obtaining loans from the Veterans' Land Act, the Canadian Farm Loan Board and our Provincial Farm Loan schemes. This budgeting and planning has undoubtedly been helpful both to the lender and the borrower. Perhaps unfortunately as far as the borrower is concerned it has been treated as a necessary evil, sort of a loan condition. However, in many areas farmers pay for farm management and planning services. Those farmers fortunate enough to be near a farm management service office (these are rather rare indeed in Eastern Canada) may for a fee obtain the services of a competent farm manager to aid in laying out a profitable plan.

In recent years the agricultural economics department of Macdonald College through its farm management classes has tried to systematically plan a number of Quebec farms each year. Because of staff limitations we have not been able to follow these plans, but we have in the manner of a farm management service laid out a complete farm plan for the cooperating farmer.

The innumerable possibilities in crops and livestock programmes for Quebec farms pose an almost impossible task of selecting the most profitable combination of these enterprises even when the farm situation is known well. However, as our knowledge of Quebec farm organization and operations increases we will be able, like colleges in the United States, to formulate farm management problems by statistical methods which can be solved with the use of electronic computers. Thus McGill's new electronic computer will, it is hoped, allow us to increase the scope of the problems that we consider and improve the accuracy of the answers offered.

In the meantime the limited farm management planning work carried out by students and staff is not only adding to the number of workers trained in this work, but also is adding to the information which the college has with respect to the organization of Quebec farms and practices used on them. This accommodation of knowledge is one, but only one of the requirements before the college can expand this work and offer a widely available farm planning service.

LIVESTOCK MEN – ADVERTISE IN MACDONALD FARM JOURNAL

INDEX – Macdonald Farm

Vol. 21, No. 4 **April, 1960**

	PAGE
Editorial	2
Myth of the Perfect Carburetor	4
Report to the Province	6
To Talk of Many Things	9
What's Your Beef?	11
Short Story	12
The Country Lane	13
The Better Impulse	14
Month With the W. I.	16
Prize Winning Essay	18
Recipes	19
Quebec Subsidy for Seed Potatoes	21
Certificate of Merit	22
Right Generator Essential	23

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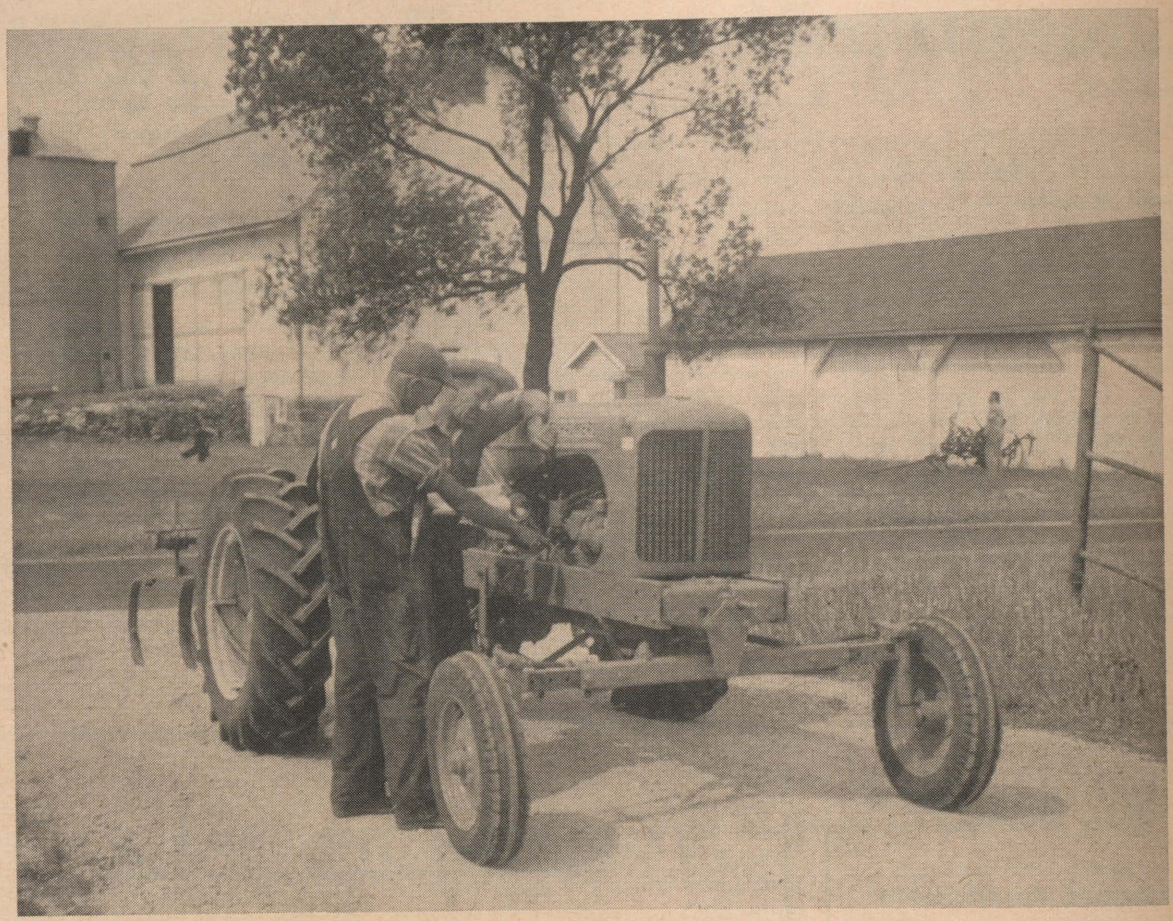
The Myth of the Perfect Carburator

Beware of the medicine men who want to sell you such marvels as gas savers, octane pills and carburetors which burn more water than gas.

By Professor Angus BANTING



Checking the carburetor on their tractor, and probably realizing it is only responsible for part of the efficiency of operation.

WHAT would you do if you received a letter like this?

Dear Sir:

I am a Junior Farmer, and I am trying to make a go of farming, and would like some advice.

Everybody knows that a carburetor that will get most of the power out of a gallon of gas is not allowed to be sold. I would like to learn something about such carburetors and how they are different from the ones you get on tractor and car engines. If you are not at liberty to tell me about them, can you advise me where I can find the information?

Yours very truly,

That isn't the exact wording of a letter I received a while ago, but it is the substance of it.

Now there's a real letter! I'm sure that quite a few readers will applaud it. No beating about the bush, no pussyfooting, no hesitation. Just a direct demand for information on the carburetors a lot of you have heard about, or read about, but never seen.

It reminds me somewhat of the old story about the lawyer who demanded a "Yes" or "No" answer from a witness when he asked the question, "Have you stopped beating your wife?" If I say there is no such carburetor the writer of the letter will secretly, or perhaps openly, conclude that I am under pressure to keep such a carburetor off the market. If I say that the carburetor now being used on tractors, and cars is just as good as manufacturers can make for the money, the writer of the letter will not likely believe me anyway, so perhaps I should save my breath.

There are several implications in the letter that should be examined. The first one is that the writer implies in the last sentence that I might be under some pressure to keep a really efficient carburetor a secret. Let's be reasonable about this. Just supposing there were such a carburetor, and an attempt were made to keep it secret. True, there may be a number of people who would fall in line, but College people are a pretty independent lot as a general rule, and there are bound to be some who would re-

fuse to co-operate. After all, this is a democracy. If such a carburetor does exist, the chances of keeping it out of public's hands would be very slim.

And yet we have all heard the stories of carburetors that gave fantastic results, either in increased power or reduced fuel consumption. Unfortunately, when they are tracked down, they prove either to be hoaxes, genuine frauds, or, as the story often goes, they were purchased by a major oil company to be suppressed lest they make serious inroads on sale of fuel.

What is the possibility that some day one of these perfect carburetors will be developed? This should be a worthy objective for researchers into engine design. It is a fact that continuous research is being done on all the problems of engine efficiency, and improvements are being made each year and passed on to the public.

Carburetor Not Alone

One very important point should be stressed here, namely, that the carburetor is not alone responsible for the amount of useful power which can be extracted from one unit of fuel. All the carburetor can do is vapourize the fuel and mix it with air to make the most explosive mixture. This is a pretty big contract, when you consider the variable loads on both tractor and car engines, and the real wonder is that they do it as efficiently as they do.

Each of the following is, to a certain degree, responsible for the efficiency of operation. (1) the design of the engine. This involves the mechanics of the size of the parts, the shape of openings and so on. (2) the fuel system, (3) the ignition system, (4) the exhaust system, (5) the lubrication system, (6) the cooling system, and (7) the method of operation. Since the carburetor is only one part of one of these systems, it should be evident that its influence on the over-all efficiency of the engine is somewhat limited.

More Efficient Operation Possible

In spite of the fact that there is little hope of realizing the perfect carburetor, which is mythical, it is quite possible to increase the efficiency of most car and tractor engines to a considerable extent for the very simple reason that, after being operated for a short time, the efficiency is likely to have dropped below the maximum possible. We listed above seven different systems in the engine, or the factors influencing the efficiency of operation. Let us examine these in detail to see how they could be changed to improve the efficiency of any individual engine. First, there is little we can do about the design. However, it should be stressed that an engine is very carefully designed to give a certain power output. Good design can be offset by dirt and poor adjustment. Carbon building up in the cylinder can change the compression ratio and poor valve adjustment can change the valve operation sequence resulting in a decrease of power. Hence, a properly adjusted and clean engine is one of the first essentials to high economy. Proper adjustment also applies to the fuel system. Mainly these adjustments are made in the carburetor.

The ignition system is much more important than most people realize. Dirty spark plugs with improper gap adjustment can result in the loss of 10 per cent or more of the power from gasoline. Besides this, even the best of plugs will not operate properly unless supplied with the proper current and voltage at the proper instant. Hence, the timing and condition of the distributor or the magneto are very important.

The influence of the exhaust system on economy generally is not very great. It is only when the exhaust is restricted that the economy is cut down and this doesn't happen very often. It can, however, result from the accidental flattening of the exhaust pipe.

First class lubrication contributes a great deal to the life of a machine. The best of lubrication is desirable as a means of reducing friction losses in the engine. So far as the cooling system is concerned, it should function to keep the engine at the constant temperature for which it was designed. Operating an engine at higher or lower temperatures because of clogged radiators or defective thermostats can cut down efficiency.

The method of operation has a much greater influence on efficiency than most people realize. For maximum efficiency an engine should be operated at or near its rated load. As the rate of load drops for any engine speed, the efficiency drops away down. For this reason, it is most desirable to operate the engine as near its rated load as possible. Since you have no means of actually measuring this, you have to learn from experience when the engine sounds right. Operating at rated load for any speed of the engine will give you the feeling that the engine is working hard but not labouring.

On field work, or any drawbar work, it is frequently possible to make a choice between two gear ratios and different engine speeds to get the same forward travel. The rule to follow here is to put the

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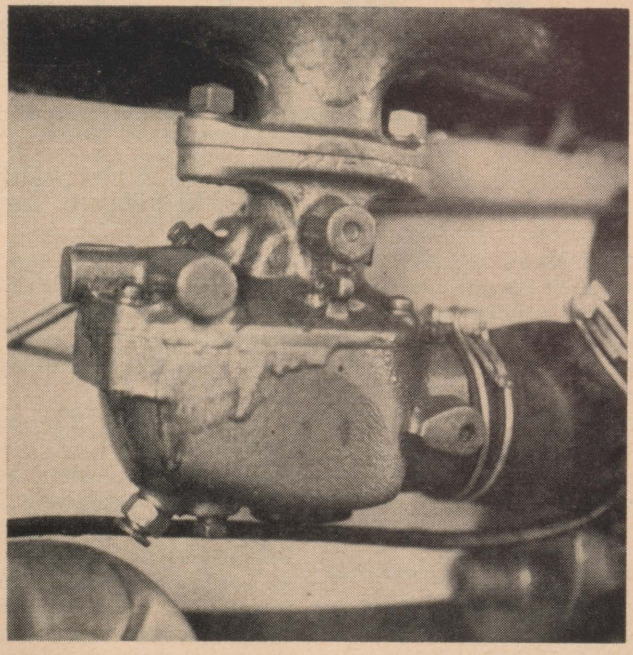


The perfect carburetor? Well, maybe not. But it's reasonably efficient and is on a 1960 model of a well known make.

THE DEPARTMENT OF AGRICULTURE
gives a
Report to the Province

At a recent meeting, E. Mercier, Superintendent of the Experimental Farm at Lennoxville, where some of the trials on these plant varieties are carried out, was awarded a brief case in recognition of his services to agriculture. L. to R. in the group: Edward Brisebois, Assistant Director of Extension, André Auger, Field Crops Commissioner, Mr. Mercier, Jean LeClerc, Chairman of Quebec Fertilizers Inc., and F. A. Raymaley, of American Cyanamide.

Time To Think of Seeding Again...

. . . And some recommendations of the Quebec Seed Board

By André AUGER
of The Publicity Committee

THE Seed Board is made up of a number of committees whose task is to analyse the results of the variety trials which are conducted on experimental farms and at Macdonald College. Thus, its recommendations do not depend merely on the opinion of one man nor of several men but are founded rather on research and conference.

The Hay and Pasture Committee

The most important of these committees, the one concerned with hay and pasture crops, met at Montreal on the 4th and 5th of February to study the results of trials of varieties of the principal forage plants which have been carried out over the past few years and to prepare recommendations for 1961.

The following figures will give some idea of the scope of the committee's work: this involved eight different forage plants growing in pure and unmixed stands, namely: alfalfa with 14 varieties; double cut red clover, eight varieties and single cut red clover, 4 varieties; white clover, 8 varieties; bird's-foot trefoil, 7; timothy, 13; brome grass, 6 and orchard grass 11. Most of these plants and varieties were on trial at the following places: Ottawa, L'Assomption, Lennoxville, Ste-Anne de la Pocatière, Normandin, Caplan and Macdonald College. In certain cases, trials were also carried out on some of the illustration stations. An idea of the amount of work entailed in the recording and analysis of the experimental results may be formed by considering that each variety trial involved from four to six replications on each of the farms concerned and, in many cases, trials were repeated for four or five years. It is thus only after

the results of four or five years' experiments are available that the Committee proceeds to draw up its list of recommended varieties.

All this, however, covers only one aspect of the problem because, since forage plants are nearly always in mixtures, it becomes necessary to study the performance of the different plants (and also in some cases of their different varieties) when grown together. This committee therefore undertook the task of studying, over a period of up to four years, and at the same trial grounds where the pure stands were grown, eleven different mixtures sown during the course of three or four different years.

All this experimental work, though already of immense scope, has nevertheless proved to be inadequate as a basis for truly valid recommendations. A study of the results obtained so far has shown the need for further information at the regional level because of the fact that the plants are found to vary more widely in their behaviour, as between the different regions, when they are grown in mixtures than when they are grown in pure stands. Moreover, since some of these mixtures are very often used, (contrary to the Seed Board's recommendations) to provide both hay crops and pasture, it has become necessary to examine their performance in each of these two roles. This means that in such cases the number of trials must be doubled.

The Cereal Committee

Plant breeders are continually striving to develop new varieties, superior in one or more qualities to those already known. Promising new varieties, after having been kept under observation for several years by their originators, are then submitted to experimental farms in the Province for preliminary elimination trials. Initial trials of oats, of this kind, were held at six trial grounds and of barley, at five. In the case of oats, four known varieties and 21 new strains were tested, and in the case of barley, three varieties and 22 strains. The tests were replicated four times at each experimental farm. These preliminary trials were followed by the Eastern Canada comparative trials, carried out at 73 different stations, in which nine varieties and 16 strains of oats were entered and six varieties and 14 strains of barley.

Lastly, before a variety is definitely recommended, it is submitted to a final trial known as the locality tests. In these, 10 varieties of oats were tested at 29 localities and 9 varieties of barley at 22 localities. In each of these three kinds of trials, every variety or strain is judged according to the following criteria: resistance to lodging, earliness, length of straw, bushel weight, weight per thousand seeds, percentage of hull and yield per acre. The study of the reports and the analysis of the data from all these trials occupied the members of the Committee during the 9th and 10th of February and will form the basis of their recommendations for 1961.

The Roots and Corn Committee

This Committee met on the 3rd of February to study the results of trials of sugar beet, silage corn and grain corn, and soy beans.

Twenty varieties of sugar beet were tested at three different stations for yield per acre of roots, of tops and of sugar, and for the amount and percent purity of their sugar content. Naturally enough of these trials were carried out mainly in the part of the Province where sugar beets are now being grown.

Tests of 22 late varieties of silage corn were conducted on 3 stations, and of 22 early varieties on 2 stations. The varieties were compared for growth and development, yield per acre, number of ears, dry matter content of stalks and of cobs at harvest time, and days required for normal growth.

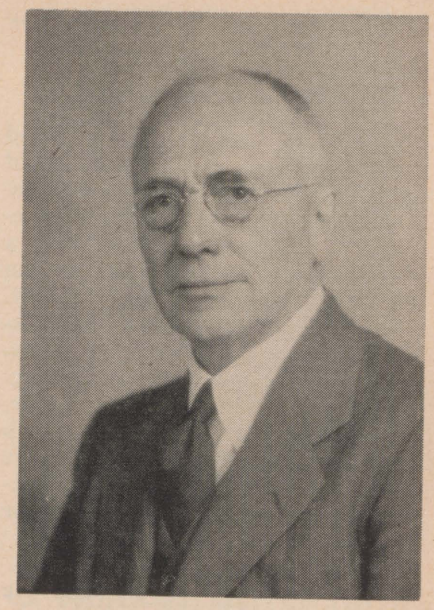
The Committee has tried to decide whether grain corn can be grown as a crop in the Montreal district, by testing 16 varieties on three stations for yield per acre, number of days to maturity, moisture content of cobs at harvest time and so forth.

The results of the trials carried out in the Province of Quebec are compared with those obtained on three stations in Ontario.

Soy Beans

The Committee felt that the number of farmers in the Province who were interested in growing soy beans, justified the testing of those varieties which appeared most promising for our climate. Therefore, variety trials were carried out on three trial grounds with six varieties. The principal factors studied were: the time required for the plant to reach maturity, yield of seeds per acre and protein and oil content.

This, very briefly summarizes the work of the Seed Board Committees. The Committees submit their reports to the Board's executives who finally make the necessary decisions.



Dr. Emile-A. Lods, President of the Quebec Seed Board.

THE CARE AND FEEDING OF BREEDING GEESE

LOUIS Bélisle of the Poultry Division of the Quebec Department of Agriculture gives the following advice regarding the care and feeding of breeding geese. Only geese which are really vigorous and in good flesh should be chosen. The males should be between one and six years old and the females between two and fifteen.

The birds should not be too fat at laying time. During the period when they are getting ready to lay, they should be given plenty of green-stuff such as alfalfa, clover or chopped roots, and a little whole grain, mainly oats. Mr. Bélisle recommends the feeding of a mash, free choice, beginning three weeks before mating time, in order to stimulate the flock and promote egg-laying. The formula for making up the mash is as follows: 200 pounds of bran, 200 pounds of whole wheat, 200 pounds of cracked corn, 200 pounds of oats, 200 pounds of barley, 600 pounds of ground alfalfa hay, and 400 pounds of ordinary protein laying supple-

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THE CARE AND FEEDING OF BREEDING GEESE

(*Continued from page 7*)

ment. With this should be mixed two gallons of cod liver oil and one percent of mineral substances.

If possible, give the birds vegetables and chopped roots once a day. Geese may be allowed out on pasture when conditions permit. Snow will provide them with drinking water in winter but clean water must be provided in spring. Premature laying can be discouraged by putting females, which show signs of sitting, into a crate with a perforated or slatted bottom and keeping them there for about six days.

WHAT IS THE MEANING OF "PER CENT LAY?"

IT is essential for the poultryman to know the "per cent lay index" of his flock so that he can discover the productivity of the birds and their efficiency of feed conversion, the effectiveness of his feeding programme and even the state of health of the flock. In order to find the per cent lay, it is only necessary to keep a record of the number of eggs laid and then a simple calculation involving the number of laying birds.

André Lemay, instructor in poultry husbandry at the Quebec Department of Agriculture, explains the methods which are generally used in making this calculation, as follows:

To obtain the daily percentage, divide the number of eggs laid in a day by the number of birds and multiply the answer by one hundred. If the percentage is estimated on the basis of a week's egg-production, several calculations will be saved and, in addition, the result will be more accurate. In order to do this, multiply the total number of eggs laid during the week by one hundred and divide by seven times the number of birds.

Mr. Lemay believes that if poultrymen would calculate the per cent lay of their flocks more often, they would discover the need for several improvements in management, such as culling and the feeding of a diet conducive to better egg-production.

Books for keeping egg-production records in may be obtained free of charge by applying to poultry instructors. These books contain a formula for use in calculating the percent lay.

SUGGESTIONS FOR MAINTAINING THE APPETITE OF LAYING FOWL

LAYING birds, especially during the winter months, must maintain an ample rate of food consumption if they are to sustain a high level of egg-production, for there is an intimate connection between feeding and laying. Any reduction in the quantity of feed consumed by the flock will show up within a few days as a decline in egg-laying. Furthermore, loss of appetite often follows upon a period of intense egg-production, although it may also be brought on by a faulty feeding programme.

Ulric Gauthier of the Poultry Division of the Quebec Department of Agriculture, recommends a few ways in which poultrymen can maintain the appetite of their birds. One effective method consists in feeding a wet mash in troughs, preferably during the afternoon. The mash is prepared, immediately before being set before the birds, by mixing some of their regular laying mash with water. No more is given than they will clean up in 15 or 20 minutes. The change from dry feed to wet mash stimulates the appetite of the birds and allows them to consume the amounts of food they need to produce eggs and maintain satisfactory body condition.

Those poultrymen who consider that the feeding of wet mash involves too much extra work (particularly in the case of large flocks) may resort to the simple method of giving an additional meal of pelleted feed, at the rate of about 3 to 5 pounds per 100 birds per day.

Loss of appetite may also be prevented by the use of grain, either scattered in the litter or in troughs; by the frequent addition of fresh laying mash to the feed hoppers; by feeding a supplement of compressed greenstuff, and by the use of artificial lighting. In addition, there are on the market commercial stimulants, composed of vitamins or antibiotics, which are very effective if they are used in accordance with the makers' instructions.

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To Talk of Many Things

Getting Your Money Back With Wool.

By John ELLIOTT
Agricultural Fieldman

A DOUBLE cash crop. This is what a sheep farmer can expect when he markets his lambs and wool. The least cared for is wool and the reasons why this is so may be many.

To receive the highest returns it is necessary to have the highest quality. Wool grading is based on fineness and strength of fibre, lustre, shrink and freedom from foreign matter. All these qualities can be controlled by good but simple management. Good wool production is a year round undertaking but fortunately not a difficult one. Approximately five hours per year is spent on each ewe. Four points are to be considered when preparing wool.

Breeding Wool tends to "run off" to a coarse grade around the breech. Selection must be made for evenness of fleece. In breeds with black on them care must be taken to make sure no black fibres run through the fleece. As the age of the ewe increases wool decreases in quality taking on a hairy appearance.

Health If a sheep is in poor health it will definitely affect the wool. Sheep in poor health will not develop a good fleece growth which will also lack strength of fibre. The flock must be kept free from internal and external parasites. Nodular worms can be eliminated with phenothiazine tablets (given after shearing and before putting on pasture), and a cunic drench for tapeworms. Dipping or spraying for ticks or keds is not only beneficial to the health of the animal but also tones up the wool to give it the sheen or lustre of a healthy fleece. This should be done a couple of weeks after shearing. Lambs must be dipped also as the parasites may leave the adult sheep and attach themselves to the lambs.

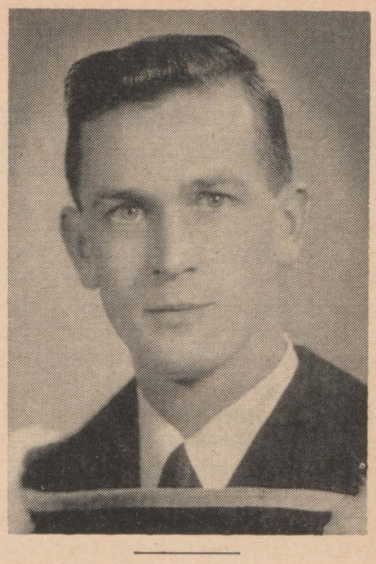
Feeding Many good fleeces have been ruined by throwing hay over the sheep's back. Once chaff, seed, or straw get into a fleece it cannot be picked out. Two methods are recommended to avoid this. Use a feeding rack or hold the sheep in a band and after placing the hay on the floor let them come to it. One of the worst offences is the presence of burdocks in the fleece. They are impossible to remove by hand and only done at a great expense by the woollen mills. As a result the price decreases. Weed killers will eliminate them from pastures.

Shearing The first essential is to shear on a CLEAN surface. A tarp is ideal for this. Shearing should never be done when the fleece is wet or damp. This may spoil a good fleece by mustiness. If crutching has not been done before lambing, it should be done before shearing to remove any tag locks as it may stain the wool. The face and leg clippings should also be removed particularly in black faced sheep. Tag locks and clippings should be placed in a separate container. If the belly wool is very dirty with mud, chaff or burrs, it is a good idea to remove it first and pack it separately. In shearing, avoid any second cuts and shear with long strokes.

When the fleece is off it should be spread out on a clean surface, flesh side down, any dirty or chaffy wool removed, then folded from side to centre and rolled from butt to head. This means the fleece is rolled inside and kept clean. Use paper twine to tie but not binder twine.

To receive the highest dollar returns it is important to have as little off grade or reject wool (tags, bellies, dippings, etc.) as possible. Care must be taken throughout the year. If regular wool sacks are not available make sure the sacks are clean. Bran sacks should be turned inside out to avoid any remaining bran adhering to the wool.

The demand for good wool is high. A wool grader cannot do the impossible in trying to make a fleece better than it is. Obviously therefore, the best wool grading is done on the farm.



THE BEST WAY TO LIFT THOSE BIG FEED BAGS

MAYBE you're a better man than any in the country when it comes to lifting and heaving feed and fertilizer bags. But don't let your son start out trying to imitate you. A poor job of lifting could cripple his back for life.

"Take time out to teach him the six steps of safe lifting. They're all based on the idea that the strongest muscles are in the legs, thighs, arms and shoulders, not in the back," says Hal Wright, safety expert. Here is his system:

FIRST, make sure you have a solid footing. Back strains (wrenched back) result from losing your balance and throwing too much weight on the back muscles.

NEXT, squat down close to the object. The idea is to bend your legs and keep your back straight. In this way, your legs and not your back do the lifting. Don't get down to a full squat—the weight of the load won't let you straighten your legs. Just crouch so you can exert your full leg power. Keep your back fairly straight but not like a ramrod; the idea is not to bend at the waist where your back has to do the lifting.

THEN, grab the load firmly. A sudden shift in the load could throw the weight on your back. Result: a strain.

NOW, take a deep breath while you're lifting so that your muscles are tensed. You avoid strain that way too.

NEXT, carry the load close to you. You distribute the load over your whole body, keep better balance and less weight falls on the muscles of the lower back.

FINALLY, get help if the load is too heavy. Don't aim for weight lifting championship.

ELECTRONIC AID TO BEE KEEPING

TO the layman the noise made by a honey bee is little more than a pleasantly drowsy sound on a summer afternoon. The bee keeper, of course, knows that this domesticated insect makes many different noises — and each has a special significance. Some interesting examples of this bee 'language', recorded inside the hive, have been given by E. F. Woods of the BBC engineering division, who has recently been elected a Fellow of the Royal Entomological Society. As a result of 10 years research Mr. Woods has now invented and patented an instrument called an apidictor which enables the bee keeper to detect the noise — inaudible to the unaided human ear — which indicates that a colony of bees is about to swarm. Mr. Woods explains the usefulness of this electronic device, which marks the first big step forward in bee keeping for a hundred years, as follows:

"The primitive method of bee keeping was based on the instinct bees have to swarm," he says. "Each colony of bees produced up to 15 new colonies by swarming, usually in the spring, and the new colonies were put in hives and allowed to build up in the summer collecting and storing honey and wax. In the autumn, all but one of the colonies resulting from one mother colony were destroyed and the honey and wax harvested. The remaining colony repeated the cycle next year.

"In 1851 it was found if one could prevent bees from swarming the quantity and quality of the honey would improve enormously. But it is very difficult to prevent swarming since it's the bee's natural method of reproduction, and for a century the only method known has been to examine carefully all the bee colonies at regular intervals and to deal with those containing queen cells, which are a visible sign that the bees are going to swarm. Now this examination needs to be made every 9 or 10 days from mid-April to mid-July; on every colony it takes five or ten minutes and it's quite hard work to lift up the components of a hive which may weigh up to 60 pounds each. What's more, the continued disturbance to the bees seriously reduces the honey crop. And since only 3 per cent of the colonies actually show signs of swarming, 97 per cent of the work is wasted."

This method is applied to millions of colonies of bees throughout the world — 10 million in the United States alone — and the tremendous waste of labour and honey shocked him so much, Woods said, that he set about trying to find out whether any sound gave warning of an intention to swarm, and discovered that it did. If the queen bee in a colony was laying briskly, the royal jelly which the nurse bees produced was all used up in feeding the queen and the young larvae. The nurse bees usually kept very quiet; but if they could not get rid of their royal jelly because they wanted to restrict the egg-laying of the queen, then their note rose to a plaintive, bubbling sound. This sound was vitally important because it indicated a queen failure — or reduction in egg-laying—which was a necessary preparation for swarming. But since it was inaudible to the unaided ear it had to be filtered out from the general noise of the hive and amplified before it could be recognised, and this was what the apidictor did. It had been successfully used for several years to predict swarming and had often given more than 20 days notice of the issue of a swarm.

The principle of the apidictor has been established in tens of thousands of tests, but in its present state of development it is a highly subjective instrument which requires skill and discrimination on the part of the operator, and a sufficiently keen ear to distinguish between tones. It is already being used by some bee keepers in Australia, New Zealand, Tasmania, and the United States and Britain, and orders and enquiries have been received from bee keepers in other countries.

Chinese cook water lillies with meat; many Europeans use marigolds and primroses in soup. Arabs use rose petals as a base for preserves and the French make jelly from violets. The English use alfalfa buds in salad and in Western Canada we occasionally have milk flavored with stinkweed.

DON'T TAKE A CHANCE ON RAPE POISONING

Rape is a bargain crop in a lot of ways: it can be seeded late in years that pastures look poor and cattle can graze it late into the fall. It is lush and green, easy to grow and a cheap source of feed — when things go well.

The trouble is, like a lot of bargains, rape has some drawbacks. In years when there is an abnormal amount of moisture and early frosts, it can poison cattle. Under such conditions, the normally green rape often takes on a purple color.

How do you recognize the disease?

"After the animal has gorged on this lush pasture, he will stand off by himself and have no interest in eating," explains Dr. J. F. Cote of the Ontario Veterinary College.

He adds: "The animals usually have a tucked up appearance and there is no evidence of any manure coming through them. The animals may have a pale yellow look around the eyes and mouth. At this stage their digestive tract is paralyzed and the substances absorbed from the food mass in the stomach will cause a variety of symptoms."

Other things to look for, adds Cote, include blood-tinged urine, which can result in anemia. Affected animals may wander aimlessly into things and they're often violent.

"Probably the most common effect of rape poisoning is on the animal's lungs", says Cote. "There is an escape of air from the air spaces into the supporting lung tissue. As a result, the breathing becomes quite labored and if the animal has to be driven in from the pasture to the barn, it will be completely exhausted and short of breath. In advanced cases air may even escape from the chest cavity out under the skin. In such cases, death often occurs within a few hours."

Here are some of Cote's suggestions to avoid trouble.

Fill cattle up on hay before turning them into rape pasture. Let them graze on rape only a few hours each week.

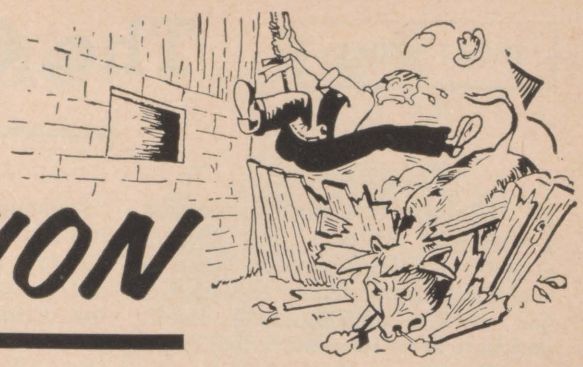
Keey hay or straw available in the field.

Have the rape pasture next to an old meadow so the cattle have access to both fields.

Inspect animals daily.

Call a veterinarian early. He will often unload the stomach, and administer fluids and antidotes to minimize losses.

Letters for our BEEF SECTION



THE HOW AND WHY OF TREE PLANTS

Editor, Macdonald Farm Journal,

Dear Sir:

The Department of Lands and Forests neither grants nor sells tree plants for ornamentation. But it grants tree plants for reforestration when the reforestration project has been approved by a forest engineer of the Forestry Extension Bureau upon an inspection of the piece of land to be reforested. The grantee has however to pay the packing and shipping charges if he does not call for his trees at the distributing nursery.

If you are anxious to get a grant of trees, please let me know where your county property is located and send me a sketch showing the roads permitting to reach your place and the spot of your property upon which you plan to plant trees. The Forestry Extension Bureau will then carry out this fall or next summer the required inspection.

May I point out that the Department does not grant trees for the production of Christmas trees. Also that Scotch Pine is not a very valuable species and must be used in reforestration only where the soil is too poor for more valuable species.

Yours very truly,
Director, Department of Lands and Forests, Quebec.

SOME THOUGHTS ABOUT SHEEP

Dear Editor:

I was glad to see a good letter the other day in your Opinion Page about sheep. Now that spring is here, I find myself thinking more about sheep than almost anything else on the farm. With some people spring sends them rushing to the seed catalog or they start looking for an old clucker to put over a clutch of eggs. As for me, I like to look over my shears and pills and watch the lambs play post office. I guess there is no use trying to tell today's busy agricultural industrialist (he's seldom a farmer anymore) about the joys of being with sheep, but I can't help but feel that if the good woman of the house would take an interest in this section of the farm livestock, there would be a brave new day for the whole industry. After all, in mother's day she looked after the hens. But the hens have gone big time now, and where the loss used to be nothing more than a few bags of the old man's fall wheat, it can run into thousands now with the new progress.

Anyhow I want to say a word or two about all this howl that sheep men set up every so often about the unfair competition from New Zealand and Australian lamb. I don't think we've got any right to holler because if you look at the trade sheet between our nation and the countries down under, you'll see that we sell them a lot more than we buy from them. Furthermore, their lamb reaches us at a time when we have no lamb to put on the market and should help keep the lamb idea before the housewife. We can't begin to satisfy the demand for lamb from our Canadian flocks anyhow, little as that demand is. And what no one seems to talk about is the fact that a very healthy advertising program for lamb now appears in several of our trade magazines thanks to Australia and New Zealand. Instead of resenting such advertisement we Canadians should cash in on it. Lamb is a wonderful meat and I've always thought that if we had some new young blood in the Canadian sheep industry, and some men who know how to win friends and influence people, we would have little trouble in getting a lot bigger market than we have had for the last 40 years. Instead, what do we do? When the government decides we need an advisory board to devise a new program to help the sheep industry, they call in the same tired old men who have always been the industry's voice.

To get back to this Australian problem, I have just one thing to say. I don't think the lamb which comes up here frozen from the other side of the equator can hold a candle to ours in quality. Therefore the first thing I think we should do would be to energetically proclaim the stellar qualities of "Canadian Lamb" and make absolutely certain that the housewife is at all time aware of the fact that she is buying "Canadian Lamb" and not storage lamb — whenever we have that lamb to offer her.

45 Years With Sheep,
Shefford Co.,
Que.

STILL WAITING FOR AN ANSWER

Dear Mr. Editor:

Some time ago — last fall I think it was a letter appeared in your fine little magazine from a pig breeder who wanted to know why the packers and the government didn't do something about marketing a pig at 150 pounds live weight instead of 200. The points brought out were most interesting to me as I have been trying hard to make a dollar out of my pigs all winter. The younger the pig, the more economical his gains and the better his meat.

It was this realization which made the poultrymen pull out and put the rest of the meat industry 20 years behind them. Now I've looked and looked for somebody to point out one good reason why pigs shouldn't be marketed earlier and no one has spoken up. What gives on this, anyhow?

J.R.
Mystic, Que.

SHORT STORY

The Great Underneath

By M. TOLLEY

IT HAS always seemed to me that however ordinary my family may be in other respects, there is one thing in particular in which it has always distinguished itself, and that is in its remarkable capacity for argument. And being the official Moderator for such disputes requires the wisdom of Solomon and the patience of Job at one and the same time.

But the argument which took place at the breakfast table a few Saturdays ago was about something really important, I think, though an outsider would have found that hard to believe because the dissension arose over nothing more serious than what we were going to do with the little pile of lumber which has been laying in the driveshed since last summer.

The older lad has been coaxing me for a long time to let him have it for a pigeon loft and I had quietly compromised by saying that we would use it for a new duck pen with a pigeon loft above. But when we mentioned our plans at the table that morning, the young lad who is now six, and perhaps a bit too conscious of the weight which should attach to such an age, was quite bitter about it. "What!" he said "you going to use that good lumber on an old duck pen?"

I asked him what was wrong with that. Did he know of any better place to use it?

He certainly did. "How about a stable for when my pony comes?" he asked.

When his big brother told him with a straight face that he wouldn't need a stable for his pony because you always put your pony at the foot of your bed at night, he still wasn't satisfied. And I knew for sure then, that it was the fate of the lumber rather than that of the pony which was his concern of the moment.

His big brother, who is now a mature thirteen in his first year of high school, began to rib him a bit. "You must think that lumber is bird's-eye mahogany," he said.

Junior didn't know anything about bird's-eye mahogany, but he did know that a dirty old duck pen wasn't the place for the pile of boards, and he got so vehement about it that he threw out his very worst French swear word at us. "Tabanouch!" he hollered shaking his spoon at his brother's face, "That's my lumber too, see?"

I thought he was going to shift into French again, but Mama came over with the porridge pot just in time. "Your father is actually going to use that lumber?" she asked. "I was sure he'd wrap it in cellophane and leave it there."

The reason for all this strange to do is, of course, that this is lumber from the logs the boys and I cut down last summer in our very own bush; from logs which we trimmed and sectioned with our own aching backs, and hauled away to the mill with our own fat-backed mare. Most certainly it can't look like much to others. To begin with, it is only poplar; the boards are rough and full of knots, and the sparrows have cast their aspersions upon it at every chance. The sun too has put such a permanent wave in much of it that my wife once slyly suggested that with just a bit more warping the wood should make excellent frames for modernistic paintings. A tortured something about the soul of it which would be so fitting for such an assignment!

But then the wife can't see the wonder of that lumber as we can, because she wasn't in on the great adventure. What can she know of the sweat and the blisters with which we slugged those logs out of the bush last summer; of the exasperating harness that wouldn't stay wired together; of the logging chain that wouldn't stay chained; of the disinterested mare who continually got angled in the alders; of the trees which didn't fall in the direction we pointed out to them but went reeling crazily into the arms of their fellows?

And what could she know of the mosquitos which were always lighting where it was the hardest to scratch? Huge creatures they were, apparently made to order for the big tough men we pretended we were that week. (So big they were that the older lad, who is beginning to show the first evidence of a modern liberal education by the extravagant way he throws the King's English around, gravely declared that they could stand flat-footed and suck a cow!)

Well, those were the things their mother could never know, and it was the remembering of such things which was the real reason for the dispute that morning. The lumber was sacred to both of them. And realizing that as I did, I could not help but feel a glow of satisfaction that my boys were already making the acquaintance of that deep and wholesome pride one develops for the creations of his own hard bare hands.

I weighed my judgment carefully. "Tell you what we'll do," I said. "We'll use the lumber on a new duck pen all right, but we'll put it where it will never be covered over. We'll use it to line the pen. O.K.?"

Junior considered that carefully and finally said it would be O.K., so that's where we finally put it last week. We all worked together on that part of the job, and when the last board was up, Junior sat down on the saw horse beside me and gave that odd little sigh with which those of his age so often express a joy too deep for laughter.

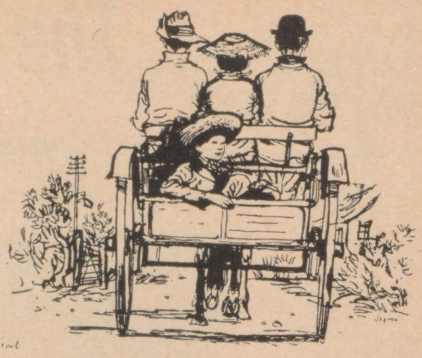
"Bet those boards are the strongest in the world, eh dad?"

While I was agreeing with him, I began to think of how fashionable it seems to be now to be concerned with the shining finished product, the milk in the bottle, and the eggs in the brightly lettered cartons: I thought of that growing proportion of our people who know nothing of what lies behind and beneath such products except what they have been told: I thought of the people who think it smart to be rid of the necessity for such knowledge.

It all seemed so foolish to me, even dangerous perhaps. And I was glad that it wasn't that way at our place. And as I sat there listening to the lad's man to man talk with me, I began to smile a bit as I suddenly recalled that time during our logging adventure when this same youngster had come up through the cow pasture with a drink of fresh water for his brother and me. After he had handed us the pail he sat down on the log beside me and quite solemnly he said, "Dad you know those round flat things the cows leave all over the field?"

(*Continued on page* 21)

The Country Lane



ALLELUIA

The sky was crimson in the west,
As was Your head, O holy Guest,
The day You gave Your life, and blessed
The sinning world.

The lake was blue beside the shore,
As was the cloak Your mother wore
The day she watched the Son she bore
Condemned to death.

The sky was blazing bright with gold,
As was the earth that day of old
When risen as You had foretold,
You saved the world!

Margaret Simpson.

THE GREEN GATE

Twelve gates there are in Heaven's wall,
Round the city as clear as glass,
And every gate is made of pearl
Through which the white Souls pass.

But there's another humble gate,
A wicket, green and low,
That leads to wide and pleasant fields,
Where long cool grasses grow.

The Apostles stand at the gates of pearl,
But, by this gate of green,
He, Who created both man and beast,
The Lord's dear Self, is seen.

He calls to His creatures to enter in,
And opens the wicket, wide,
And the poor things when they hear His voice,
Flock through to the other side.

Tired horses and mangy cats,
And poor lost dogs are there;
And little birds once cramped and caged,
Come singing through the air.

Fair is that city of golden streets.
With the gates of pearl flung wide,
But let me come through the little green gate,
And stand by my Master's side.

WHERE THE POET GETS HIS DUE

Poetry is the most inspired use of language, and poetry is the art in which the Welsh have most excelled. Their tradition of poetry is a long one and goes back to the Sixth Century. In early times the poet or bard had his place in the courts of the princes, till Wales had princes no more; and in terms of esteem I suspect the Welsh are kinder to poets to this day than any other European people except maybe the Irish. An author friend of mine was telling me a few weeks ago, on his return to his native land, "Well, the rock is tougher and the water wetter, but the poet, thanks be, still enjoys a bit of respect in Wales. They don't poach hare or salmon round here without offering me a lump. You couldn't say that for the English."

Professor GWYN JONES,
of the University College of Wales.

WHERE THE SAP IS RUNNIN' FREE

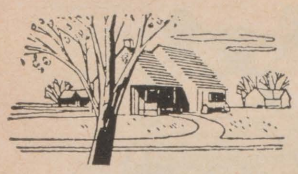
The seedtime and the harvest,
Behold, they shall not fail,
The seedtime and the harvest,
Thro' all ages shall prevail!
Now I will give a reason,
Why I should happy be,
For, lo! it is the season
When the sap is runnin' free.

The snows are in the forest,
You sink down to your knee,
But the saddest and the sorest,
Can now be full of glee!
For the big sapsucker's drilling!
In a lofty maple tree,
His canteen he is fillin'
With the sap that's runnin' free.

Oh, the crows they are paradin'
Away above our heads,
And the killdeers they are wadin'
Down in the marshy beds!
The big sapsucker's rappin'
Makes a pleasant melody!
You will not catch him nappin'
When the sap is runnin' free.

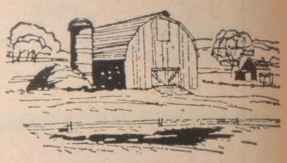
Of coin you are not scanty,
And you may take your ease;
If you've a sugar shanty,
And a bunch of maple trees!
Oh, trouble can't come troublin'
And from all cares you're free,
When the cookin' pots are bubblin'
And the sap is runnin' free.

And at the time of writin',
The basswood buds do swell,
Cock robins are all fightin'
There's a bull frog in the well!
A wakin' world is yawnin'
His tonsils I can see,
Lo! a better day is dawnin',
And the sap is runnin' free.



The Better Impulse

NEWS AND VIEWS OF THE WOMEN'S INSTITUTES OF QUEBEC



Q.W.I. Life Membership pin, presented to Mrs. Jean Roy, of Howick Women's Institute, by Mrs. Roy Younie, President. Mrs. J. D. Lang, Secretary of the Branch holds the Life Membership Certificate.

OFFICE HAPPENINGS

LEADERSHIP COURSE — By this time you will all have received the program. The courses are Nutrition, Textiles, Line Block Printing, Decorating with Tiles, Landscaping the Farm Grounds, and a Grooming Clinic. Something for everybody. The program gives more detail about each course —to help you to decide—but they have been arranged so all may take the Grooming Clinic. Come and see a member 'made over.'

ACWW Essays: (1) "Our Children and Their Games." (2) "How I Broaden My Horizons Through Group Contact and Study." Closing date Sept. 1, 1961. Anyone wishing to enter may get rules from QWI office.

Hasti-Notes of Adelaide Hoodless Birthplace may be obtained from QWI office through your branch secretary. Box of 10 for 55 cents.

Secretaries — DON'T FORGET TO SEND IN MEMBERS' NAMES AND ADDRESSES FOR THE MACDONALD JOURNAL. Very few have come in.

Nominations Committee Chairman — Mrs. G. C. Henderson, 27 Club Ave., Dorion, Que. Resolutions Committee Chairman — Mrs. Merlin Lewis, Sutton, Que.

And a note from an Editorial in Home and Country, S. Rhodesia, quoting from the remarks of two chairmen at a FWISR Congress — "They remind us that the achievements of the Federation, although worthy of great pride and satisfaction, are not the real strength of the movement, and that our greater strength rests upon the thousands of services rendered by the Institutes within their own districts."

Any branch wishing the Nescafe service should notify the office at least three weeks in advance — with approximate number to be served.

FROM UNRELATED FAMILIES FOUR IVIES DIFFER WIDELY

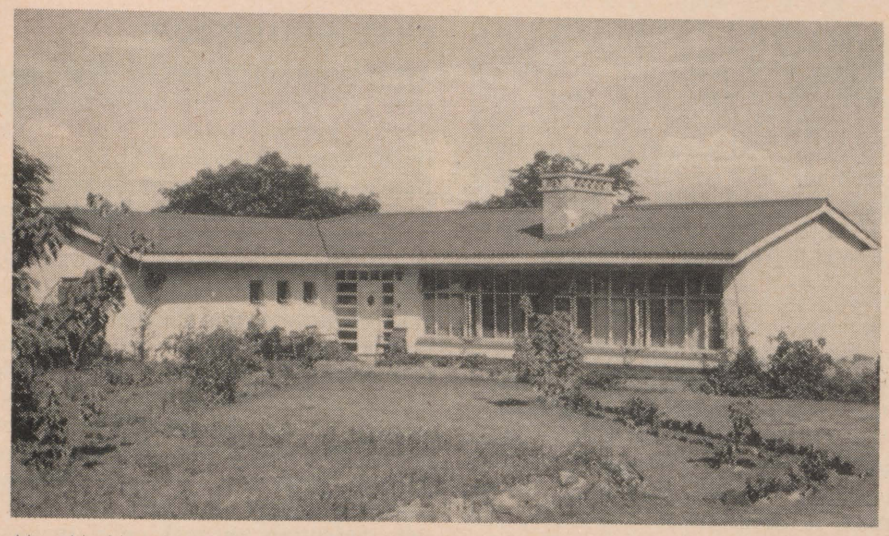
ENGLISH Ivy, German Ivy, Grape Ivy and Kenilworth Ivy, all commonly called ivy, are popular house plants. However, they belong to widely different and unrelated families.

Some varieties of English ivy are dwarf, with small leaves, while others are tall plants with large leaves. Both types have green or variegated leaves, depending on the variety. English Ivy is attractive when planted in pots and trained on a trellis or other support, in hanging baskets, in bracket pots, in window boxes, or in water culture. This ivy is highly resistant to dry air, high temperature and changes of temperature. Some of the dwarf types are not good climbers but thrive as trailers or creepers.

To propagate, root tip cuttings in sand or water. If placed in wa-

(*Continued on page* 20)

Our Far Away Sisters . . .



Mrs. M. Marsden, Editor of "Home and Country," the Women's Institute magazine for Northern and Southern Rhodesia, sent this photo of a typical home in Livingstone, Nr. Rhodesia area.

. . . And Nearer Home

A PRAYER (copied from Institute News, P. E. I.)

"Lord, Thou knowest better than I know myself that I am growing older, and will someday be old.

"Keep me from getting talkative, and particularly from the fatal habit of thinking I must say something on every subject and on every occasion.

"Release me from craving to try to straighten out everybody's affairs.

"Make me thoughtful, but not moody; helpful, but not bossy. With my vast store of wisdom, it seems a pity not to use it all—but Thou knowest, Lord, that I want a few friends at the end.

"Keep my mind free from the recital of endless details—give me wings to get to the point.

"Seal my lips on my many aches and pains — they are increasing, and my love of rehearsing them is becoming sweeter as the years go by.

"I ask for grace enough to listen to the tales of others' pains. Help me to endure them with patience.

"Teach me the glorious lesson that occasionally it is possible that I may be mistaken.

"Keep me reasonably sweet; I do not want to be a saint —some of them are so hard to live with, but a sour old woman is one of the crowning works of the devil.

"Help me to extract all possible fun out of life. There are so many funny things around me, and I don't want to miss any of them."

"A fish salesman's clerk at Wick had his cap blown into the harbour recently, and there it drifted around for days. Then a fishing boat was blown against the seawall an dholed. But as she began to sink, the cap was sucked into the hole in hte hull and stemmed the flood until firemen arrived and saved the boat. The clerk then got his cap back."

Trevor Blore reporting in the 'Merchant Navy Programme.'

CITIZENSHIP PROJECT FOR SENATOR CAIRINE WILSON TROPHY

THE 1959-1961 Citizenship Project is to be a scrapbook of a project for community betterment, showing before and after pictures and accompanied by the story. Your citizenship convenor has received all the details. Unlike the first competition, which was individual, this will be a branch effort. Nevertheless, it is not the number of branches in a province which will determine the winner, but the merit of some individual branch's entry. The provincial competition closes on March 31, 1961, which gives you several months to select a worthwhile project, complete it, and then make your scrapbook. I hope the Quebec Women's Institutes will follow up on the excellent beginning we made in the first national Citizenship project.

In the essay contest, I report with much pride that one of the members of the Cavagnal Branch, Mrs. Frank Wilson, Hudson Heights, won second place. I am sure you would like to read her essay. After reading it, you will understand why this essay placed second in a national competition with about 30 entries from provinces all across Canada.

Mary L. Watson,
Provincial Convenor of Citizenship

(Mrs. Wilson's Prize Winning Essay is on page 18)

The Month With the W.I.

THIS is the month of annual meetings, and it is encouraging to hear of so many new members, a good beginning indeed, for a new W. I. year. Subscriptions to the Federated News are mentioned, this is our National Publication, and we are urged to have "Every F.W.I.C. Member a Federated News Subscriber." Other items frequently noticed are Education Week, the T.V. and Radio Survey, the Board Meeting, and the Adelaide Hoodless project.

ARGENTEUIL:

ARUNDEL executive entertained their husbands and friends, at a Valentine party. BROWNSBURG enjoyed a course on "Party Ideas" given by Miss J. McOuat. A talk on Parliamentary Procedure was given by members of the Toastmaster's International Club. DALESVILLE had a round table discussion, which gave members a chance to air their views. FRONTIER held a darning contest and are rehearsing a play, for a Spring performance: JERUSALEM-BETHANY are piecing quilts, and assisting at the Red Cross Club rooms. LACHUTE heard a talk on the laws concerning women, in Quebec. MORIN HEIGHTS heard a talk on the founding of the W.I. and held a "Brain Teaser" contest. The Publicity Convenor of PIONEER spoke on the organization of the W.I. This branch is making quilts for the Red Cross. UPPER LACHUTE EAST END enjoyed an illustrated talk, by a member on her recent trip from New York to Vancouver, via the Panama Canal.

BONAVENTURE:

BLACK CAPE remembered the sick, and enjoyed a quiz. Mrs. L. Henderson, Convenor of Education, read a very appropriate poem entitled "Valentine." GRAND CASCAPEDIA welcomed a new member, and had four visitors. Two sick people were remembered, with donations, and cheer basket. MARCIL answered the roll call with a Valentine for a shut-in. During Health Week book-marks, emphasizing good health habits were distributed to all students at the Port Daniel Catholic School, and the Shigawake-Port-Daniel Consolidated School and provided a treat of apples on Valentine's Day. MATAPEDIA held their Annual Valentine Party, at the Restigouche Hotel; obtained a membership in the Campbellton Film Council, and made donations to the Hot Lunch projects at the Matapedia Convent, and the Intermediate School. PORT DANIEL brought cotton for cancer dressings as roll call; a donation towards replacing equipment, lost in the recent school fire, heard a paper entitled "That they may walk." RESTIGOUCHE also donated to the Hot Lunch fund at the Matapedia School; Presented a baby's layette to a member, and aprons were brought for a sale.

BROME:

AUSTIN held their Annual meeting, and welcomed a new member. KNOWLTON'S LANDING worked on the Radio and T.V. Survey. SUTTON visited Sutton Milk Products. A paper on Citizenship was read. SOUTH BOLTON received a donation of knitted "Beanies."

CHAT-HUNTINGDON:

AUBREY-RIVERFIELD discussed great women, past and present, and had a talk on "Home and Family." A musical roll call was, "Sing a Chorus of an Irish Song." DEWITTVILLE held a very successful Dance. DUNDEE heard talks on "Growing African Violets," "International House in London," "Canadian Broadcasting League," and "The Perils of the Farm Pond." Had demonstrations on Home Made Lace, making popcorn, and how to re-cement linoleum tiles; sent cotton to the Cancer Society. FRANKLIN report a new member; held a Book Review in the School, and gave prize. HEMMINGFORD have arranged for a free Polio Clinic, and will hold a Public Speaking Contest. HOWICK heard an article on Education. HUNTINGDON have sent six complete layettes, plus baby quilts and bootees, to the Unitarian Service Committee. ORMSTOWN had a talk on Education, and a demonstration on making a two-way apron.

COMPTON:

BROOKBURY distributed three cases of meat, donated by the government, and contributed to the Hot Lunch Fund at the School. CANTERBURY will send cards to a sick member, and have donated to the School for Retarded Children. COOKSHIRE discussed Education and its problems. Tweedsmuir quilt blocks will be used, and blocks added; completed quilt will go to an Old People's Home; will hold a food sale to raise scholarship funds. EAST ANGUS distributed government donated meat; read an article on Trading Stamps; roll call was "A Home Remedy You Have Found Beneficial." Their paper drive was very successful.

GASPE:

HALDEMAND discussed Trading Stamps, and remembered a sick member. SANDY BEACH had a mystery parcel sale, and sent seven complete layettes to the U.S.C. YORK entertained husbands at a card party; have also completed layettes.

GATINEAU:

AYLMER EAST heard a talk on "Citizenship," by the Provincial Convenor; held a quiz on "Cabinet Ministers," and discussed exhibits for Aylmer Fair; elected a committee to submit suggestions for the 1961 Jubilee, and donated towards care of retarded children. BRECKENRIDGE enjoyed a social evening and euchre party. EARDLEY elected Mrs. J. Kennedy as their President. HURDMAN HEIGHTS had their Annual meeting, and heard excellent reports from all convenors. KAZABAZUA's worthy project is a Polio Clinic for the "Under 40" age group. LOWER EARDLEY donated $10 to the Gift Coupon Plan; held a lively discussion on the local school system, and a contest for the best St. Patrick's Day Hat was won by Mrs. H. Olmsted. RUPERT heard about the Birthplace of Adelaide Hoodless. WAKEFIELD report that a Village History has been completed by Miss A. Robb. WRIGHT had a roll call "Sing, Say, or Pay," (no one paid). The Gift Coupon Plan was discussed, and will be supported.

JACQUES CARTIER:

ST. ANNE'S welcomed a new member; made plans for a 12th Birthday Banquet and plan a course in Metal Jewellery, to be given by Miss Runnells.

MEGANTIC:

INVERNESS heard all about the Semi-Annual meeting, and completed the Radio and T.V. Survey. KINNEAR'S MILLS held a successful Card and Crokinole Party, and donated to the Hot Lunch Fund at Kinnear's Mills School.

MISSISQUOI:

COWANSVILLE contributed to the Student's Loan Fund at Cowansville High School, and subscribed for 10 copies of the Federated News. Suggestions were made for a new programme. DUNHAM donated to the Students' Loan Fund, and planned a new programme. FORDYCE heard a poem, written by Mrs. J. Moore, entitled "The Faithful Trio," honoring Mrs. M. Lewis, Mrs. E. Dryden, and Mrs. A. Dryden. These ladies also received corsages; voted money to the Students' Loan Fund, and to the Red Cross for crutches. Dues paid to the Health Magazine, the United Nations and the C.A.C. STANSTEAD EAST told "How To Keep From Growing Old," as roll call; brought cotton for the Cancer Society, and will make layettes for Unitarian Relief; the Education convenor described a meeting of the Historical Society; subscriptions taken for the Federated News; Mrs. Tomkinson won the drawing for the tea-towel sent from New Zealand, by the exchange branch; will sell "Name and Address Labels" as a money making project.

PAPINEAU:

LOCHABER discussed the letter requesting humourous anecdotes for the Jubilee, and will contribute; Board Meeting was reported and the "Journal" discussed.

PONTIAC:

BEECH GROVE served lunch to about 40 children at a skating party, and discussed ways to make the School Fair more successful. BRISTOL paid 1¢ per inch of waistline, for roll call; will hold a course, and make exhibits at Quyon and Shawville Fairs. CLARENDON had a Shell work demonstration and a Valentine contest. FORT COULONGE Dr. Rabb, of the County Health Unit was guest speaker. He said everyone should have Salk-Vaccine and Chest X-Rays. QUYON braved a stormy night to hold a Variety concert, one act play, and a Fashion show (with male models.) A hat remodelling course was held, 33 hats were dealt with. Discussed Trading Stamps and an exhibit for the Ottawa Exhibition. Made a donation to the Pontiac Community Hospital. SHAWVILLE saw a demonstration on making dinner rolls, sponge cake, and tea biscuits. Prizes awarded to winners of Bridge and Canasta Marathon, made donations to Boy Scouts, and the Guide Mother's Association. WYMAN A Home Economic's teacher from Shawville High School gave a talk on "Nutrition."

QUEBEC:

VALCARTIER are canvassing for the Red Cross. Sick members and shut-ins were remembered.

RICHMOND:

CLEVELAND awarded prizes for hooked rugs, made at the course. Mrs. A. Abercrombie spoke on the A.C.W.W. Conference. DENNISON'S MILLS held a cookie contest, and a drawing on a Valentine Cake, gave proceeds to the March of Dimes. Discussed the question of children under 16 going to the movies. GORE held a White Elephant Sale, sent gifts to new babies, and a friend in hospital. MELBOURNE RIDGE appointed a School Fair Committee, ordered seeds, remembered sick friends and planned a Rummage Sale. RICHMOND YOUNG WOMEN had a contest on "Paper Hats." Sunshine baskets were sent out. RICHMOND HILL presented cups and saucers to five perfect attendance members, and a Life Membership to Mrs. S. Smith. Completed a quilt and presented it to a family who suffered loss by fire. SPOONER POND Mrs. M. Armstrong, matron of the Wales Home was guest speaker, "Geriatrics, and Care of the Aged." SHIPTON displayed various types of Cancer Dressings; gave a talk on the Cancer Campaign, and brought cotton. Donated to the March of Dimes, and held an Apron Auction; drew for a Valentine Cake which was later enjoyed by the members. WINDSOR discussed movies, and attendance by children under 16, and the T.V. and Radio Survey.

SHEFFORD:

GRANBY HILL report two new members, a drawing for three quilts. WATERLOO-WARDEN told of their first school as roll call; gave a report of the Board Meeting.

SHERBROOKE:

ASCOT Mrs. R. Webb gave a talk on her work as a School Nurse. Clothing was given to the Welfare Association, and wool given to members to be made into garments for this cause; held a successful card party. BELVIDERE entertained another branch, and heard a talk on the "Interpretation of Welfare." Packed for the Welfare Association. BROMPTON ROAD enjoyed a talk on flower arrangement, by a florist; remembered the sick with flowers and a sunshine basket. LENNOXVILLE welcomed two new members, and entertained a branch from another County. Read an article on Canadian Indians, and their problems; had a fine display of handicrafts from other countries—India, Norway, Scotland, Ceylon, Formosa, Australia, England and the Hawaiian Islands. A small display by a pupil from the School for Retarded Children. Hooked chair seats are being made at a craft afternoon, held each week. MILBY also measured waists for roll call and plants were given out for a contest at a later date. Read a paper on "Mentally Retarded Children."

STANSTEAD:

AYER'S CLIFF working on articles for the fair. A talk on Home Economics and Domestic Science, as taught in schools today; members are to chaperone High School Dances. BEEBE held a 'Bring and Buy Sale', and entertained the County Executive; had a lawyer speak on the "Civil Code." MINTON enjoyed a Valentine Party. HATLEY CENTRE plan card parties as a fund raising project; made a donation to the High School. STANSTEAD NORTH held a dinner meeting; had a doctor speak on "Diabetes." Heard about a trip to Mexico City, and saw coloured slides. A branch member spoke on "Citizenship," on Station W.I.K.E. Newport, Vt.

How Can I Train My Child To be a Citizen of the World?

By Mrs. Frank WILSON (Cavagnal W. I.)

Second Prize Winning Essay
National Citizenship Contest

THERE are many implications inherent in the term "Citizen of the World" and before we start training a child in any concept of it perhaps we should ask ourselves if it is wise to train him in such a narrowing view of existence at all. For we must face it, the tremendous distances we can travel at unbelievable speeds may change our concept of time and space for the second time within a generation, and our world of today seem a pretty provincial affair tomorrow. Our space-minded children may look upon it as almost insignificant.

Bearing this in mind, we should next try to define what we mean by "Citizen of the World." A generation ago such a designation was loosely applied to a person who was rather blasé, who had travelled too much, seen too much and showed no particularly attachment to any particular country of culture; then came Wendell Wilkie's "One World," and we began to think of a citizen of the world as a member of a united world almost without individual nationality. For the purpose of this essay, I am going to step further and will assume that the Citizen of the World referred to in our title is one fundamentally related to our finest aspirations of the present day and that his training looks to the development of an individual dedicated to the type of thinking that will result in bringing about a better and a happier world; one imbued with a feeling of responsibility for his fellowmen that will make him eager to plan and work to help bring about a more equitable distribution of the good things of this world while his own enjoyment of life will be greatly enhanced by the assimilation into it of the cultural enrichment of others.

Our future citizen will not think of his country in terms of a narrow nationalism but will see it in the broad framework of the world; he will be proud of the good things it shows forth and of the worthwhile accomplishments of its people; he will be fervently loyal to it but, in case of conflict, will look to a peaceful solution of his problems by the United Nations. He may marry a Hindu, a Chinese girl or a Japanese, without meeting with social disapproval and be supremely happy in his choice. He may come to the conclusion that all worship is one of choose freely among a variety of beliefs.

Living under these conditions, our future citizen will probably be imbued with a greater understanding and sympathy than we had but more co-operation will be demanded of him than was required of our generation. He may be called upon to go into outer space so that he will need the stubborn courage of our ancestors who sailed into Canada and came to terms with its ice and snow and he must have limitless faith for no generation in the history of the world has ever faced such stark insecurity.

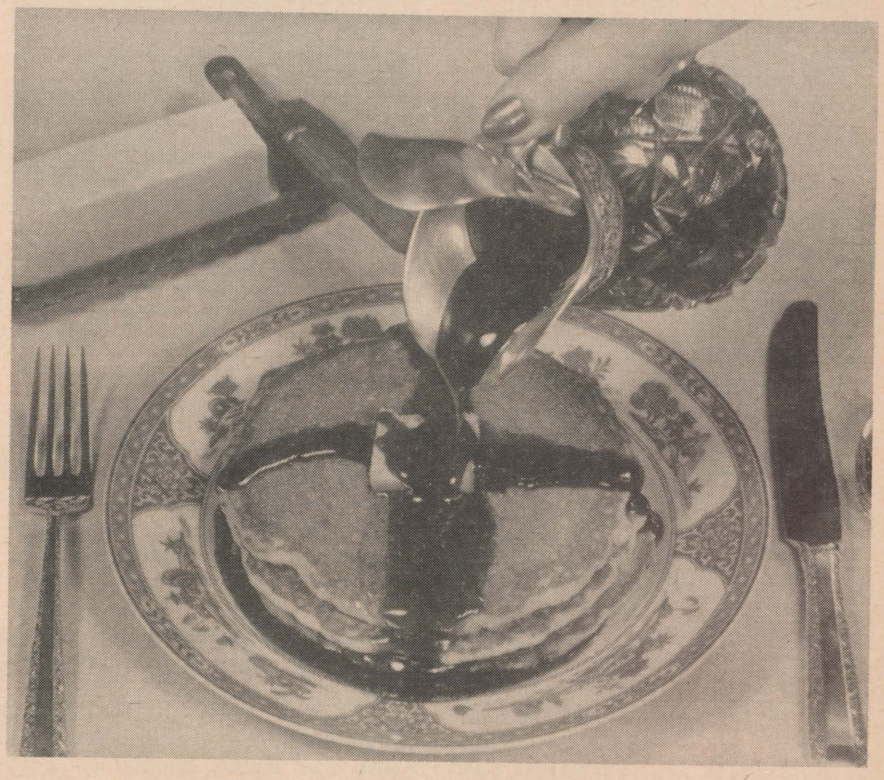
How can I train my child to become this kind of citizen? Well, I think we must begin by agreeing on certain fixed points to start from and do this by accepting provisionally that there is fundamental worth in our present ideals of racial and religious tolerance, of political freedom and justice in accordance with our favoured way of life and in culture as defined as those things that give depth and appreciation of the world about us — the world of sight and sound, of touch and taste, of spiritual aspiration and fulfilment, and of the representation of them in the arts of music, drama, painting and the dance, as well as culture defined as the way in which people live their lives in families, their customs and their cults.

Against this common background of belief we already see our children being trained for world citizenship by radio, by television, in churches, in schools. My part would be to direct him progressively, in accordance with what is suitable to his age, to the right radio programs, the right television panels; to see that our schools are staffed with teachers of breadth and vision, and to gradually open up his mind to the joy and promise of an expanding world (if he isn't already ahead of me), and to do this naturally in the course of casual conversations; to give him access to books and museums; if possible to enrich his experience with travel at a fairly early age; to accept the invitation of our Parliament to visit it and see it in operation and to help him relate the work he sees being done there to the work being done in similar institutions all over the world; to call his attention to the building of schools and hospitals where needed, and to the work of assimilating our own Indians, for everyman 'a world begins at his own door'; to call attention to the work being done to aid backward areas and the work our agricultural aid plan is doing in our own Commonwealth countries such as India; to have him watch the United Nations in session on the screen, and above all to teach him that he is a citizen of the world whether he wants to be or not. His country has made him one. She made him one when she stood up to be counted among the United Nations and to accept her share of the responsibility for the peace and betterment of the world; she made him one when her armed forces were found in disturbed areas under the banner of the United Nations and when she accepted a million immigrants as her contribution towards solving one of the major problems of the world.

As I read this over, I am reminded that my own child is a nephew who came to me at the age of seven. He is now eighteen, and in the service of his country, so that my part is no longer an active one but the passive one of prayer. Prayer for a generation whose world closely resembles that of the Elizabethans — a world filled with glamour and the mystery of almost discovered things— an unbelievable world but one in which science may yet point to such a flaming hope on the horizon as was never yet experienced by man.

RECIPE PAGE

Sweet Springtime!



ACCORDING to tradition, the Indians taught our forefathers how to make maple syrup, and sugar, and we have all benefitted from the knowledge. Happy homemakers are always experimenting with new recipes to include the luscious 'juice of the maple,' and here are a few to add to your files.

MAPLE GINGERBREAD

1 cup Maple Syrup
1 cup sour cream*
1 egg, well beaten
2-1/3 cups sifted flour
1 tsp. baking soda
½ tsp. ginger
½ tsp. cinnamon
½ tsp. esalt
4 tblsps. melted butter

Blend syrup, cream and egg. Sift dry ingredients and blend into first mixture. Add butter and beat thoroughly.

*Dairy sour cream preferably which is soured with a special culture and give a different texture to the baked product.

Bake in well greased 8 x 12" pan, in a moderate oven, 350°F. for 30 minutes. Makes 8 servings.

MASTERPIECE PANCAKES

2 cups sifted flour
5 tsps. baking powder
2 tsps. salt
3 tblsps. sugar
2 eggs, beaten
2 cups milk
6 tblsps. melted butter

Sift dry ingredients. Beat eggs in bowl, add milk, shortening and flour mixture, and stir until blended. Heat griddle or heavy frying pan slowly, until moderately hot. Grease very lightly before baking each batch. Use about ¼ cup of batter for each pancake. Cook until surface is bubbly and edges are dry Turn, brown on the other side. Makes about 1 dozen 6" pancakes.

HEAVENLY RICE PUDDING

3 cups cooked rice
1 cup whipping cream
maple syrup

Whip cream and fold in rice. Chill. Serve with maple Syrup as a sauce. Serves 6.

MAPLE FLUFF FROSTING

1 cup Maple Syrup
2 egg whites stiffly beaten, to which has been added a pinch of salt.

Boil syrup for a few minutes (230°F.) on thermometer pour slowly into beaten egg whites — beating constantly. Beat until syrup is all added — cool — spread on top and sides of cake.

FOUR ENGLISH IVIES

(*Continued from page* 14)

ter, the cuttings should be seven or eight inches long and the bottom leaves should be removed so they will not rot. Keep cuttings in subdued light until they are rooted, and then pot them in a soil mixture high in organic matter. The plants require plenty of water and need syringing frequently to keep the dust off the foliage. They thrive in good light but do not need direct sun. If checked in growth, ivy is more subject to aphids, scale, mealy bug and red spider.

German Ivy has light green fleshy leaves and is coarse and less attractive than the English Ivy, but it grows more rapidly. Useful in window boxes and hanging pots on the porch it is grown from cuttings rooted in sand or water.

Grape Ivy is an evergreen tendril climber with leaves consisting of three glossy, pointed and sharp-toothed leaflets. Others include Cape Grape and Kangaroo Vine. All these plants are of easy culture and thrive in a general purpose mixture. The soil should be moist at all times and the plants thrive in an east or west window. If they are grown in a south window, they may be shaded by thin curtains when necessary. Propagation is by cuttings.

Kenilworth Ivy is a dainty little plant that has small flowers and small, circular three-to-seven-lobed leaves. It is grown from cuttings or seed.

HOT MUFFINS CAN "MAKE" A MEAL

MOST of the faults in muffins come from over-mixing. To merely moisten the flour, not to produce a smooth, creamy batter as in making cake. A muffin batter should be lumpy. Muffins should never be beaten. Mixing the dry and wet ingredients is done by drawing flour into the liquid.

Best results are obtained when egg and milk are at room temperature. When melted fat is added to very cold milk and eggs, it becomes solid. Solid fat is not evenly distributed through the batter and poorer muffins result.

When a muffin has a shiny surface, rises in peaks, is uneven in shape or has large, uneven holes inside, it has been over-mixed.

A good muffin is even in shape, well browned, rough, pebbly and slightly round on top, even in texture, with no tunnels or large, uneven holes inside, light.

Mrs. Jean Roy, former Provincial Convenor of Home Economics, shown here with her daughter, Mrs. K. Nish, her grand-daughter Susan, and members of the Howick Branch Women's Institute.

POTATOES EVERY DAY MEAN GOOD EATING, GOOD HEALTH

COOK potatoes in their skins instead of peeling them, advises the Home Economics Service of the Ontario Department of Agriculture. This method not only saves you work but also protects the food value of the potato. When you pare potatoes, you lose valuable minerals and vitamins. Leaving the skins on during cooking prevents loss of these nutrients in the cooking water. The skin slips off a cooked potato in a second, so whether they are to be served boiled, mashed, creamed or in a salad, remember to cook them in their jackets.

Also to preserve food value, prepare potatoes just before mealtime; cook them covered and in a small amount of boiling water; cook just until done and serve immediately.

The don'ts of cooking potatoes are: don't soak potatoes in water before cooking; don't drown potatoes with a large amount of water in the saucepan; don't over-cook them, as this destroys both flavor and food value; don't let potatoes wait to be eaten, since vitamins will disappear.

MEASUREMENTS IMPORTANT IN MAKING GOOD CAKES

TO be a good cake-maker, use standard measuring cups and spoons, advises the Home Economics Service of the Ontario Department of Agriculture. These are inexpensive, so it is poor economy to save a few cents on this simple equipment and waste food because of baking failures. All good, modern recipes are based on standard measurements. For good results every time, measure exactly. Measurements must be level.

Always sift flour before measuring. The homemaker who is "too busy" to sift flour before measuring may add an extra half cup of flour to her cake and so ruin it. Lift sifted flour lightly by spoonfuls into the measuring cup and level by drawing the edge of a knife across the top. Do not press flour or shake down into the cup.

Measure small amounts of fat by tablespoons. To measure half a cup of fat, first place half a cup of cold water in a standard cup. Then add fat, keeping it below the level of the water, until the level of the water is raised to the one-cup mark. Drain off water. To measure a third of a cup of fat, begin with two-thirds of a cup of water. This method gives quick, accurate measurements.

To measure liquids, place measuring cup on level surface. The eye should be at the same level as the liquid for accurate measurement.

Use a dry measuring spoon to measure baking powder. Level with a knife. Too little or too much may give disappointing results. Keep baking powder tin tightly covered.

ARCTIC MINISTRY

VERY different from the quiet routine that some imagine to be the parson's lot was the life described in a recent radio broadcast by the Reverend Sidney Wilkinson of The Anglican Mission in Northern Canada when he was on leave in England recently.

"Two or three days of preparation, baking bread, freezing hash, breaking it up and putting it into sacks," was the first move when the season for travelling came round, he said. The bread and hash were their diet for the first days of travels as they sought out small settlements or groups of tents amidst the Arctic waste. "Out across the snow, the dogs pulling,

panting, licking bits af snow to quench their thirst. Running into the night when the sun had set and there was little light to see by; stopping to build the snow house and inside, about an hour later, sitting in our sleeping bags and chatting, sometimes laughing hilariously, always finishing up with a reading of our Bible, and prayer. Then off again in the morning, and finally into a settlement with a glad rush, the dogs howling and people coming out, glad to see us and to see if we had any food with us. Sometimes we hadn't and had to use theirs. Then we would gather round for a service. There was nothing formal about it, we just gathered round when it was convenient. Everyone sitting around on the snow bench, a Bible on their knees."

QUEBEC OFFERS SUBSIDY FOR SEED POTATOES

THE Department of Agriculture of the Province of Quebec offers to subsidize the buying of seed potatoes by paying a grant of 50 cents per 75 pound sack on purchases of 15 or more sacks. In order to qualify for the grant, the potatoes must be of "Foundation" grade, produced entirely in the Province of Quebec.

Subsidies will be granted only to growers of this Province who are engaged in commercial potato production and on condition that their orders are arranged and coordinated through the medium of the legally established and officially recognized societies or organizations of their respective counties. It is to be understood that the grant can only be made to potato-growers who need to obtain potatoes for seed.

In announcing this subsidy, Mr. René Trépanier, the provincial Deputy-Minister of Agriculture, explains that it is being made with a view to encouraging farmers to continue to make improvements and, by so doing, to satisfy the requirements of the markets; to help growers prevent losses due to disease (especially bacterial ring rot) and eventually, adds Mr. Trépanier, by these means to demonstrate the superiority of seed potatoes produced in the Province of Quebec.

Grants wil lonly be paid on purchases of seed potatoes made through the medium of the "S.C.A. de Chicoutimi" (the Chicoutimi Agricultural Co-operative) or the "Chaîne Co-opérative du Saguenay" or through the agency of the "Co-opérative Fédérée de Québec." Since the portion of the budget allotted for this subsidy is limited, growers would be well advised to order their seed potatoes without delay.

THE TIME OF THE PEEPERS

ON many a spring evening of choretime now there is a free concert being given up a farm road. The song of the peepers has begun and it is as true a voice as that of any bird. From a shallow pond behind the barn, tiny throats swell with an old plaintive music. The singers are frogs less than an inch long, but a lot of them can harmonize hugely. They are shyer than any members of a barber shop quartet. They can be heard for a quarter of a mile with the greatest of ease. But it is a job to see a single performer.

There is a census going on, but to get a count on peepers is impossible. When a peeper broadcasts he keeps his head under water as far as his eyelids. If he has the notion that any one is around, a peeper becomes as silent as a willow twig on still water. When a watcher can maintain complete quiet on the edge of a pond, a peeper may at last find courage to start again his share in the multi-chorus.

Some people with fidgety nerves think a peeper's voice is shrill. They had rather wait for morning and a song sparrow. But a countryman loves at twilight the steady tremulous cry of peepers. It is a sound from the heart of spring. It brings with it a hint of old marshlands and the return of forgotten Aprils. Snow may have but recently melted at a pond's edge, but new life speaks urgently from invisible bubbling throats. Across the wakened fields and warming air, the song of the peepers rings at twilight. It comes to a man as a free chorus. He has a season ticket. The music in a key of F minor might make a fellow a bit sad, but it also makes him think of planting peas and getting that fence mended in the back pasture.

The Great Underneath

(*Continued from page* 12)

Yes, I knew about them.

"I just found out something about them."

"Really?"

"I found out that when they're hard on the top they aren't hard at all underneath.

I helped him wipe his shoe in the grass.

Well, perhaps I'm still too young and too happily married to be much of a philosopher, but that morning in our new duck pen, as I quietly mulled the little incident over again, I could not help but think that maybe the lad had made a pretty profound discovery that day after all.

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THE PURITY ICE CREAM COMPANY LTD.

1076 MOUNTAIN ST. MONTREAL, QUE.

THE MYTH OF THE PERFECT CARBURETOR

(*Continued from page 5*)

transmission in the highest forward speed and operate the engine at the lowest speed possible without overloading. This will always give the better efficiency. In belt work, for most efficient operation, use a pulley on the driven machine which will allow you to drive it at the proper speed with the lowest engine speed on your tractor that you can use without overloading. It must be recognised, of course, that the ideal situation where the engine would be operating at an optimum load all the time is not possible for the simple reason that our loads vary continuously. But by paying attention to these two suggestions the most economical operation can be realized.

The proper adjustment of all parts of the tractor will be found in the Tractor Service Manual. A thorough study of this manual is a very worthwhile investment in time.

In closing, how should we reply to the letter included at the start? Let us say simply that the engine is designed together with all its component parts as well as the designers' know how to do the job. The tractor or car owner gets a good machine to start with. It is his own responsibility to keep it in good, efficient working order.

And the carburetor in the picture? It may not be a perfect carburetor, but it is a reasonably efficient one. It is one used on a well known make of tractor, 1960 model.

BE CAREFUL OF CHEMICALS IN 1960

INSECTICIDE experts are keeping a closer check than ever on 1960 bug killers. Reason: contamination dangers.

Ontario's Provincial Entomologist, H. W. Goble, says: "We've already taken several insect killers off our recommended list because of the chance of meat and milk contamination. Officials of the National Health and Welfare Department in Ottawa have ruled that insecticides that leave harmful residues on feed and market crops can no longer be used."

Crops to keep out of livestock feeds will be pea vines on which DDT was used for aphid control, and corn husks and cobs that have been treated with endrin or DDT for corn borer control. Forage crops on which aldrin, endrin, dieldrin, toxaphene, or DDT was applied might be contaminated too. When these crops are eaten by animals, the chemicals may stay in the milk or meat.

A cash crop insecticide, heptachlor, has been taken off the recommended list for market crops, says Goble. Don't use heptachlor for control or root maggot on turnips, radish, and onions; or for control of carrot rust fly, wireworms, and white grubs on potatoes. Heptachlor may be used on lawns, golf courses, shade trees, and in any place where food crops are not grown.

Phosphate-type insecticides such as malathion, parathion, guthion, and phosdrin may be used on crops fed to livestock. But only if there is sufficient time between treating and feeding for the residues to escape. These time-spans appear on the manufacturer's labels.

CULTURED DEER?

THERE is a farm in Montana which is rather peculiar. It is situated in the midst of a game refuge. Normally this would cause the proprietor little concern or interest; but this winter has been somewhat different.

Because of the extremely heavy snow, deer from the game refuge have picked up the habit of raiding two corncribs in the farmyard. Having selected their food, however, they do not run away as would be expected of wild animals. Instead, they choose ears of corn, move over to the farmer's window and proceed to watch his television while enjoying their feast.

This might be compared either to the human qualities of the deer, or to the animal qualities of the television. There is certainly a common meeting ground. The deer, like humans, enjoy TV lunches. The television programs appear to satisfy the cultural needs of the deer. For those who like to have their doubts about the general calibre of TV programs, here indeed is food for thought.

ONTARIO CHEESE WINNER IN LONDON

ONCE again Ontario Cheddar Cheese has proven its worth in international competition.

The Dairy Branch of the Ontario Department of Agriculture has learned that the Farmer's Joy cheese factory, Monkland, Ontario, has been awarded the Bledisloe Perpetual Challenge Trophy at the recent Dairy Show held in London, England.

The cheesemaker, Mr. Harold Montgomery, is well known for the quality of his work and has been a regular winner in Canadian competitions and former international competitions.

"The winning of this international competition is evidence of the high quality of Canadian cheese and the skill of our cheesemakers," says the Hon. W. A. Goodfellow, Ontario Minister of Agriculture. "It is particularly important with the competition taking place in the United Kingdom which provides an important market for our premium cheddar."

MACDONALD FARM JOURNAL WINS AWARD

THE editors of this magazine were agreeably surprised last week to find themselves the recipients of a Thor Certificate of Merit in recognition of "the outstanding contribution" made by the Journal to "better farm living."

We were totally unaware of the existence of the Thor Foundation at the time but have discovered since that this is a non-profit organization with headquarters in Chicago, and that its purpose is to encourage initiative and to honor accomplishment in agricultural progress. Its annual awards are made to teachers, researchers, farm and youth leaders, developers of farm equipment and techniques, and to the farm press.

Founded in 1956 by Neil C. Hurley Jr., wealthy American engineer and manufacturer, the Foundation also maintains a model farm and Research Center at Huntley, Illinois, where experimentation explores such agricultural fields as animal feeding, conservation, and automation.

A committee of leaders from agricultural colleges and farm groups comprise an advisory board to the Foundation and all its activities. This is the first year that a Certificate of Merit has been awarded to a Canadian farm periodical.

RIGHT GENERATOR ESSENTIAL

MAYBEE there will be another ice storm, maybe not. But if you're thinking about buying a generator for stand-by power, this advice might be of some help.

You can buy generators that can be operated by P.T.O., belt power, gasoline motor or a natural gas engine. Tractor-driven generators produce an alternating current of 110/220 volts with an output varying from 3,000 to 12,000 watt capacity. Units producing 500 to 3,500 watts on 110 volts are driven by gasoline engines.

What size generator will fit your needs? Hal Wright says "It varies with the amount of power needed to supply essential equipment."

Here's what a dairyman might need:

- ½ h.p. milking machine needs 6-7 amps.
- ¾ h.p. bulk milk tank needs 10-12 amps.
- ¼ h.p. bulk milk tank agitator needs 4-5 amps.
- ½ h.p. water pump motor needs 6-7 amps.

These total 26 to 31 amps. Now use a grade school physic's formula: amperes times volts equals watts. Substituting, you get: 28 amps x 100 volts = 3,080 watts. Add 600 watts for minimum house and barn lighting and you end up with a total wattage need of 3,680 watts for one dairyman.

"Stagger the motors so you can use a smaller unit of about 2,500 watts to handle emergency requirements," suggests Wright. "A generator of this capacity (complete with control panel mounting a voltmeter and plug-in receptacles) costs about $400. Bigger tractor-driven units producing 3,000 to 12,000 watts range from $425 to $700."

Can you afford it? Wright thinks milk production losses might eat up the cost of a generator within a week. Other convincers: two dairymen could stagger their milking hours and both use the same portable equipment; portable generators are handy as power units for welding equipment breakdowns in the field.

TOO MANY DAIRY BULLS DON'T GET EXERCISE

TOO often a bull calf goes short of exercise. And this kind of treatment will not only weaken his breeding powers but could render him completely impotent before he reaches maturity.

There is another danger too: by the time the sire is old enough to have daughters in milk—just when you can really judge his value as a herd sire—he is useless for breeding purposes.

Dairy scientists think these 4 ideas might help:

- A special power exerciser set to keep the bull walking at a slow pace around the circle.
- Placing a long sweep on a post, and tying the bull to one end, allowing him to revolve the sweep by walking.
- Chaining the bull to an overhead cable, and letting him walk the length of the cable.
- A heavy barrel or block which can be bunted about the pen.

If more than one bull is kept, they may be allowed to run together, says Rennie. There is no danger in this system if the bulls are dehorned.

One of the chief advantages of having bulls together is that the bulls take more exercise than when confined alone.

His winter coat matted with crusted snow and icicles, this dejected little burro at the Calgary Zoo was a victim of a late April snowstorm that swept through the foothills and Prairies last year.

THE MACDONALD LASSIE